AMENDMENTS TO THE CLAIMS:

The following listing of claims supersedes all prior versions and listings of claims

in this application:

Claim 1 (Canceled).

2.   (Currently Amended) An apparatus A data relay device according to claim

22, further claim 1, comprising means for receiving payload data transmitted by other

similar devices.

3.   (Currently Amended) An apparatus A data relay device according to claim

22, claim 1, further comprising a data source.

4.   (Currently Amended) An apparatus A data relay device according to claim

22, claim 1, wherein the evaluating selection means is arranged to identify only identify

a suitable receiving device if the scalar status value meets one or more threshold

criteria.

5.   (Currently Amended)   An apparatus ~~A device~~ according to claim 4,

wherein a threshold criterion is that the remaining battery power is at least sufficient to

transmit all the data currently in the buffer.

6.   (Currently Amended)   An apparatus ~~A device~~ according to claim 4, having

means for selecting a threshold criterion as a function of elapsed time from a

predetermined start point.

7.   (Currently Amended)   An apparatus ~~A data relay device~~ according to claim

22, ~~claim 1,~~ further comprising condition-monitoring means for monitoring expected

lifetime of the device, and adjusting the scalar status value accordingly.

8.   (Currently Amended)   An apparatus ~~A device~~ according to claim 22, ~~claim~~

~~1,~~ wherein the separation distance between devices is determined from the power

required to make a transmission between them.

9.   (Currently Amended)   An apparatus ~~A device~~ according to claim 22, ~~claim~~

~~1,~~ comprising means for determining the power that would be required to transmit

payload data to an identified receiving device, and means for generating a scalar status

value related to that power requirement.

10. (Currently Amended) An apparatus A device according to claim 9,

wherein the identified receiving device on which the power determination is based is the

device selected for transmission on a previous determination.

11. (Currently Amended) An apparatus A device according to claim 9,

wherein the scalar status value h is determined by the value $(N + k) C/ B$

where N = number of packets of data currently in the buffer,

B = battery level,

C = power requirement of forwarding to the identified receiving device, and

k is a constant.

Claim 12 (Canceled).

13. (Currently Amended) A method according to claim 20, claim 12, wherein

data is only transmitted from a first device to a second device located in its forwarding

direction if the scalar status value derived from the status data meets one or more

predetermined threshold criteria.

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14.   (Original) A method according to claim 13, wherein a threshold criterion is that the remaining battery power is at least sufficient to transmit all the data currently in the buffer.

15.   (Currently Amended) A method according to claim 20, ~~claim 12,~~ wherein the sensor ~~status~~ data includes a measure of the expected lifetime of the device.

16.   (Currently Amended) A method according to claim 20, ~~claim 12,~~ wherein the sensor ~~payload~~ data is transmitted, by means of one or more of the mobile data ~~wireless~~ relay devices, to a target sink device defined by a predetermined scalar status value.

17.   (Currently Amended) A method according to claim 20, ~~claim 12,~~ wherein the power that would be required to transmit sensor ~~payload~~ data to the identified other ~~an identified receiving~~ device is determined, and a scalar status value is generated related to that power requirement.

18.   (Currently Amended) A method according to claim 17, wherein the identified other ~~receiving~~ device on which the power determination is based is the device selected for transmission on a previous determination.

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19. (Previously Presented) A method according to claim 17, wherein the scalar status value h is determined by the value (N + k) C/B

where N = number of packets of data currently in the buffer,

B = battery level,

C = power requirement of forwarding to the identified receiving device, and

k is a constant.

20. (Currently Amended) A method of collecting data from distributed mobile data sensors respectively associated with mobile data relay devices communicating with each other, in an ad hoc mobile network when ~~within~~ they happen to be within communication range of each other, said method comprising:

collecting sensor data in buffer stores of each said mobile data relay device;

generating a scalar status value in each said mobile data relay device based on current local status parameters including at least the amount of collected sensor data currently accumulated in its buffer store and its separation distance from other of said mobile data relay devices;

communicating respective said scalar status values between said mobile data relay devices that happen to be within communication range of each other;

at each said mobile data relay device, evaluating received scalar status values

from other devices with respect to its own scalar status value; and

if said evaluation satisfies a predetermined condition for an identified one of the

other devices, then transmitting at lest part of its accumulated sensor data from its

buffer store to said identified other device where the received sensor data is stored in its

buffer store for later similar transfer to yet another device.

21.   (Currently Amended) A method as in claim 20, wherein:

at least one higher powered data sink station also communicates with said

mobile data relay devices when they happen the happen to be within communication

range; and

said data sink station communicates a scalar status value which, when received

by a data relay device, will be evaluated so as to cause the data sink station to be

identified as the recipient of accumulated sensor data from the buffer store of that data

relay device.

22.   (New) An apparatus for collecting data from distributed mobile data

sensors respectively associated with mobile data relay devices communicating with

each other in an ad hoc mobile network whenever they happen to be within

communication range of each other, said method comprising:

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data collection means for collecting sensor data in buffer stores of each said

mobile data relay device;

status data generation means for generating a scalar status value in each said

mobile data relay device based on current local status parameters including at least the

amount of collected sensor data currently accumulated in its buffer store and its

separation distance from other of said mobile data relay devices;

transmitter and receiver means for communicating respective said scalar status

values between said mobile data relay devices that happen to be within communication

range of each other;

means for evaluating, at each said mobile data relay device, received scalar

status values from other devices with respect to its own scalar status value; and

if said evaluation satisfies a predetermined condition for an identified one of the

other devices, then transmitting at lest part of its accumulated sensor data from its

buffer store to said identified other device where the received sensor data is stored in its

buffer store for later similar transfer to yet another device.

23.   (New) An apparatus as in claim 22, wherein:

at least one higher powered data sink station also communicates with said

mobile data relay devices when the happen to be within communication range; and

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said data sink station communicates a scalar status value which, when received

by a data relay device, will be evaluated so as to cause the data sink station to be

identified as the recipient of accumulated sensor data from the buffer store of that data

relay device.

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